

REPORT DOCUMENTATION PAGE

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for review data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (4302). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

AFRL-SR-BL-TR-01-

aining the
reducing
22202-
a currently

0328

| | | | | | |
|---|-------------|-----------------------------------|----------------------------|---|---|
| 1. REPORT DATE (DD-MM-YYYY) 06/12/2000 | | 2. REPORT TYPE Final Technical | | 06/01/98 - 01/31/00 | |
| 4. TITLE AND SUBTITLE Advanced Laboratory for Image and Video Engineering | | | | 5a. CONTRACT NUMBER | |
| | | | | 5b. GRANT NUMBER F49620-98-1-0465 | |
| | | | | 5c. PROGRAM ELEMENT NUMBER | |
| 6. AUTHOR(S) Dr. Lex Akers RECEIVED DEC 13 2000 BY: _____ | | | | 5d. PROJECT NUMBER 4276 | |
| | | | | 5e. TASK NUMBER AS | |
| | | | | 5f. WORK UNIT NUMBER | |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) The University of Texas at San Antonio 6900 North Loop 1604 West San Antonio, TX 78249 | | | | 8. PERFORMING ORGANIZATION REPORT NUMBER N/A | |
| 9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Department of the Air Force Air Force Office of Scientific Research 801 N. Randolph St. Arlington, VA 22203-1977 | | | | 10. SPONSOR/MONITOR'S ACRONYM(S) AFOSR | |
| | | | | 11. SPONSOR/MONITOR'S REPORT NUMBER(S) | |
| 12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution unlimited. | | | | | |
| 13. SUPPLEMENTARY NOTES AIR FORCE OFFICE OF SCIENTIFIC RESEARCH (AFOSR) NOTICE OF TRANSMITTAL DTIC. THIS TECHNICAL REPORT HAS BEEN REVIEWED AND IS APPROVED FOR PUBLIC RELEASE LAW AFR 190-12. DISTRIBUTION IS UNLIMITED. | | | | | |
| 14. ABSTRACT See Attached | | | | | |
| 15. SUBJECT TERMS | | | | | |
| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
| a. REPORT | b. ABSTRACT | c. THIS PAGE | | | Dr. Lex Akers |
| | | | | | 19b. TELEPHONE NUMBER (include area code) 210-458-4490 |

20010521 173



The University of Texas ★ San Antonio

Grants and Contracts Administration

(210) 458-4234

FAX: (210) 458-7434

R: 00 1212
A: 010101

NTI

MEMORANDUM

Date: December 5, 2000
To: Air Force Office of Scientific Research
From: Dr. Lex A. Akers, Co-Principal Investigator
Subject: AFOSR # F49620-98-1-0465

RECEIVED
DEC 13 2000
BY: 8

Final Technical Report

This report announces the completion of an advanced laboratory for image and video processing that will allow UTSA faculty and students to do complex analysis of images and videos. Such image analysis is of critical interest to both U.S. military and civilian institutions as the Air Force, Army, Navy, and the National Aeronautics and Space Administration (NASA).

The laboratory is complete. It consist of a powerful 4 processor SGI machine and a number of workstations connected by a high speed interconnect system.

The laboratory is being used for computer-intensive processing of immense volumes of image and video data, developing innovative algorithms, and evaluating sophisticated algorithms. It allows the UTSA team to develop processing architectures, and design parallel architectures, circuits, and devices. Further the lab allows us to conduct significant numerical studies that exploits innovative massively parallel image detection algorithms, wherein compute-intensive classification/recognition techniques will be improved by concurrently processing multiple images thereby increasing the detection rates and reducing false alarms.

We will bring students recruited from UTSA undergraduate and graduate minority programs into the laboratory, educate them on modern image processing technologies and provide them an opportunity to have access to large image and video databases. These recruited undergraduate students will have the opportunity to work on class projects involving engineering research or develop an imaging or video project for their senior design class. Therefore, their resulting projects serve an important academic role while providing an incentive for graduate studies. On the other hand, the recruited graduate students will benefit from this experience in several major ways. First, the equipment will be used to process data, which will complement the theoretical models developed by the students. Second, they will have the opportunity to participate in sponsored research as research associates. Finally, their research may become the theoretical foundation for a thesis.

12-12-00A08:04 RCVD